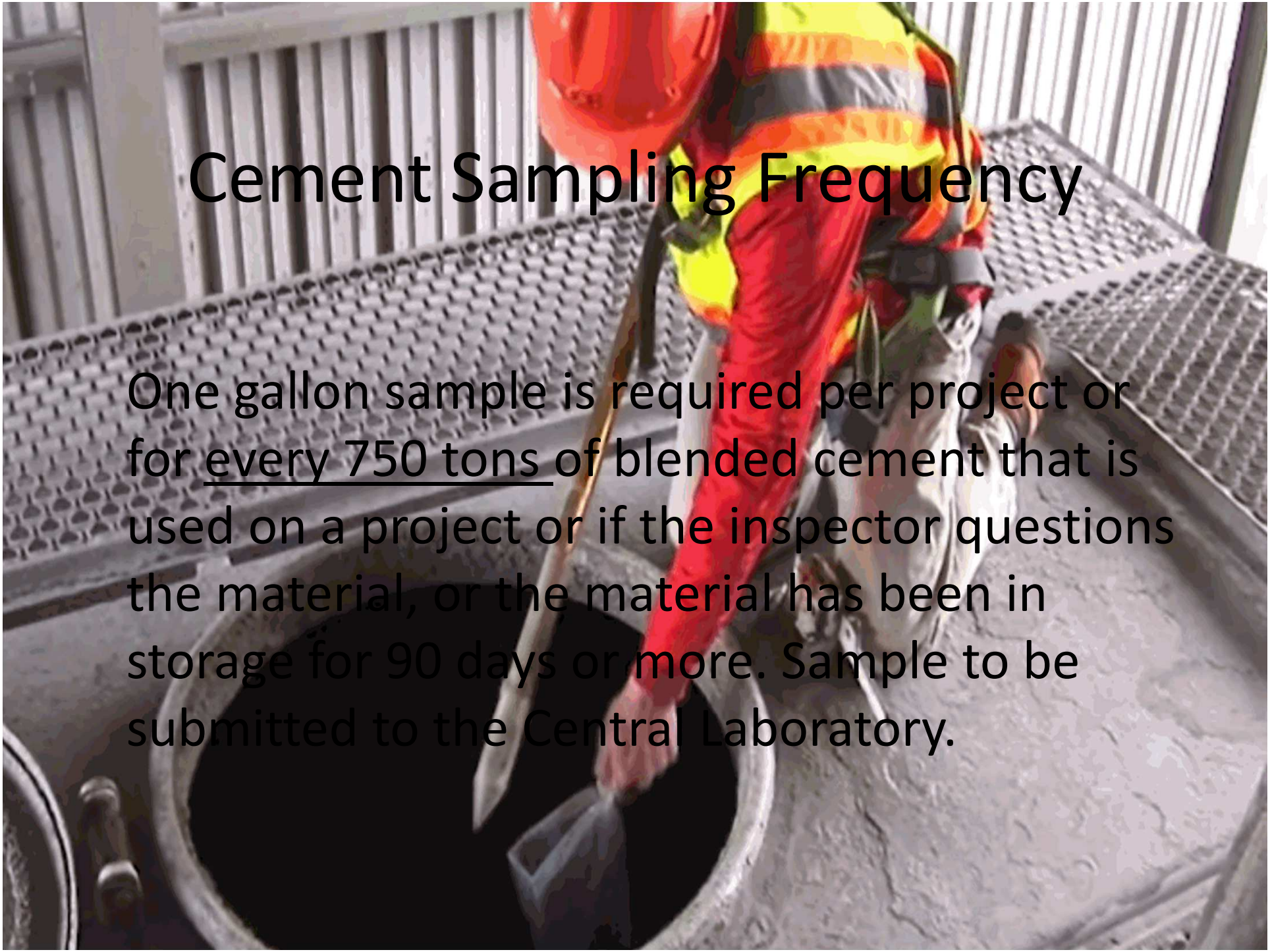
PCC Pavement Research & Development Section

Materials & Research M&R Setting the Standard

March 13, 2012

NDOR Nebraska Department of Roads



Cement Sampling Frequency

One gallon sample is required per project or for every 750 tons of blended cement that is used on a project or if the inspector questions the material, or the material has been in storage for 90 days or more. Sample to be submitted to the Central Laboratory.

Portland Cement

1004.04 – Acceptance Requirements

1. a. Cements for use on NDR projects must be on the NDR Approved Products List.

   b. Cements will be placed on the NDR Approved Products List based on conformance with the NDR Acceptance Policy for Portland and Blended Cements. This information can be found on the NDR Materials & Research website.

2. Portland cement chemical and physical test requirements shall conform to NDR Acceptance Policy for Portland and Blended Cements contained in the NDR's Materials Sampling Guide.

3. **All cements shall be sampled and tested at the rate as described in the NDR's Materials Sampling Guide.**

   a. NDR will inform the Contractor when a sample is required.

   b. A sample shall be taken by a Contractor's Certified Portland Cement Sampler and must be under the supervision of NDR certified personnel.

   c. The sample shall be taken at the plant from a bulk shipment of a rail car, dry bulk trailer, batch plant silo or from the line between the bulk truck and the silo. Upon sampling, NDR will take custody of the sample.

Dry Pit Aggregate

Section 1002.03 Paragraph 8.

Aggregate from a dry pit and coarse aggregate shall be uniformly saturated with water before it is used. The wetting shall begin 24 hours before concrete mixing to allow complete saturation.

Section 1033.02 Paragraph 3. a. (3) will be replaced by the following:

Aggregates from a dry pit shall be washed and have a sand equivalent not less than 90 percent.

Class High Early (HE) Concrete

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a. High Early (HE) strength concrete shall be cured as prescribed in Subsection 603.03, Paragraph 7. The Contractor shall take necessary curing measures so the required strength is achieved.
b. High Early concrete shall achieve a compressive strength of 3,500 psi (25 MPa) at 48 hours after placement.
c. The 48-hour compressive strengths shall be used to determine pay factor deductions for high early concrete in accordance with Table 603.03.

d. A non-calcium chloride accelerator shall be used when the ambient temperature is 70 F or less.

e. When requested by the Contractor, the maturity method, as provided in NDR C 1074, may be used in lieu of the requirements of Subsection 603.03, Paragraph 11. c. and d. to determine the strength of concrete pavement for the purpose of early opening to traffic and **acceptance**.
Requests by the Contractor for use of the maturity method shall be on a project basis and shall be made in writing to the Engineer.

Maturity Method

NEW!

- Maturity Method Curve must be developed by a certified M&R's personnel (Quality Assurance Manager & PCC Assessment Section Manager
- Scheduling Maturity Method Curve for project contact Tim Krason
- PM is responsible to file Maturity Method curve in project file

NEW!

The Maturity Curve Monitoring

- PM is responsible to contact Tim Krason for provisional certification of Maturity Method Monitoring

PCC Coring & Smoothness Unit

Responsibilities

- Coring (NDOR & Contractor)
- Smoothness Verification (Pavement)
  - PM's Responsibility for bridges

For scheduling concrete pavement coring and profilograph testing of pavements and bridge decks contact Jeremy Weigel.